

REMARKS

Upon entry of the present amendment, claims 1, 2 and 4-6 will be pending in the application. Claims 1, 5 and 6 will have been amended, and claim 3 will have been canceled. Entry of the present amendment, reconsideration of the rejections and allowance of the pending application in view of the following remarks are respectfully requested.

In the Office Action, the Examiner rejected claims 2 and 4 under 35 U.S.C. § 112, 1st paragraph as failing to comply with the written description requirement. The Examiner asserted that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that, at the time the present application was filed, Applicants had possession of the claimed invention. The Examiner specifically asserted that the specification does not disclose that a width of the middle of the spacer is greater than a width of at least one end of the spacer. Applicants respectfully traverse this rejection for at least the following reasons.

Figure 2B of the present application illustrates an intervertebral spacer 1 according to an embodiment of the present invention. Figure 2B illustrates that the vertexes of claw portions 17 define the outer shape of the intervertebral spacer 1, and are arranged along curved surfaces 21A and 21B. As can be seen in Figure 2B, and as described in lines 1-16 on page 5 of the specification, the width of the spacer, as defined by curved surfaces 21A and 21B is greater in the middle of the spacer as compared to the ends of the spacer.

For at least these reasons, Applicants respectfully submit that the specification of

the present invention adequately discloses that a width of the middle of the spacer is greater than a width of at least one end of the spacer. Thus, Applicants submit that the rejection under 35 U.S.C. § 112, 1st paragraph is improper, and request withdrawal thereof.

In the Office Action, the Examiner rejected claim 1 under 35 U.S.C. §102(b) as being anticipated by Lin '158 (U.S. Patent No. 6,080,158). The Examiner also rejected claims 3 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Lin '158 in view of Lin '827 (U.S. Patent No. 6,325,827).

Upon entry of the present amendment, claim 1 will have been amended to include all of the features of claim 3, and further recite each of the plurality of claw portions having a vertex, with the respective vertexes arranged along a curved surface formed to extend generally longitudinally of the body. Applicants respectfully submit that, upon entry of the present amendment, claim 1 will be in condition for allowance for at least the following reasons.

The intervertebral spacer of the present invention includes, inter alia, a body that is defined by a pair of upper and lower surfaces and a pair of side surfaces connected to the upper and lower surfaces. The intervertebral spacer also includes a withdrawal preventer that is formed on the upper and lower surfaces of the body. The withdrawal preventer includes a plurality of linear claw portions that extend from one side surface of the body to the other side surface, each of the plurality of claw portions having a vertex, with the respective vertexes arranged along a curved surface formed to extend generally longitudinally of the body. The upper and lower surfaces of the body slant such that a distance between the upper and lower surfaces at the front side of the

intervertebral spacer is greater than a distance between the upper and lower surfaces at the rear side of the intervertebral spacer, and each claw portion is formed in an asymmetric triangle shape.

Lin '158 relates to an intervertebral fusion device. As the Examiner admits in the Office Action, the intervertebral fusion device disclosed in Lin '158 does not include claw portions having asymmetric triangle shapes. Thus, Applicants submit that Lin '158 does not anticipate the present invention.

Lin '827 relates to an intervertebral implant. As can be seen in Figure 8, for example, the distance between the upper and lower surfaces of the intervertebral implant at the front side of the intervertebral implant is not greater than the distance between the upper and lower surfaces at the rear side of the intervertebral spacer. Further, the barbs 24 of the intervertebral implant do not extend from one side surface of the body of the intervertebral implant to another side surface of the body, as can be seen in Figure 7. Thus, Applicants submit that neither the Lin '158 nor the Lin '827 reference anticipates the present invention.

In each of the intervertebral devices of Lin '158 and Lin '827, there is an inherent interrelationship between the shape of the intervertebral device and the arrangement of its barbs (or protusions), as they operate together to define how the intervertebral device fits between vertebrae. Thus, for each of the disclosed intervertebral devices, modifying either the shape of the intervertebral device or the shape or arrangement of its barbs will materially change the operability of the intervertebral device. Thus, Applicants submit that the features of the Lin '158 and Lin '827 devices cannot be haphazardly combined to arrive at a new intervertebral device, as the Examiner asserts.

Furthermore, none of the references disclose the feature of each of the plurality of claw portions having a vertex, with the respective vertexes arranged along a curved surface formed to extend generally longitudinally of the body. Instead, the ridges of the claws in the references are arranged generally rectangularly on one side surface of the intervertebral body.

In view of the above, Applicants respectfully submit that the intervertebral spacer of the present invention comprises a unique, non-obvious combination of features, distinguished from the applied prior art. For at least these reasons, Applicants request withdrawal of the rejection of claim 1, and respectfully submit that upon entry of the present amendment, claim 1 will be in condition for allowance.

Applicants submit that upon entry of the present amendment, dependent claims 2, 4 and 5 will also be in condition for allowance for at least the reasons set forth above with respect to claim 1.

In the Office Action, the Examiner also rejected claims 2 and 4 under 35 U.S.C. 103(a) as being unpatentable over Lin '158 in view of Henry et al. (U.S. Patent No. 5,766,252).

Claims 2 and 4 depend upon claim 1. As discussed above with respect to claim 1, the intervertebral fusion device of Lin '158 does not include claw portions having asymmetric triangle shapes, and the shape of the protrusions of the intervertebral fusion device of Lin '158 cannot be modified without materially changing the operation of the intervertebral fusion device.

Furthermore, Henry does not disclose a intervertebral spacer that includes a withdrawal preventer having a plurality of linear claw portions extending from one side

surface of the body of the intervertebral spacer to the other side surface, where each claw portion is formed in an asymmetric triangle shape. Also, Henry does not disclose the feature of each of the plurality of claw portions having a vertex, with the respective vertexes arranged along a curved surface formed to extend generally longitudinally of the body. For at least these reasons, Applicants submit that claims 2 and 4 are in condition for allowance.

In the Office Action, the Examiner also rejected claim 6 under 35 U.S.C. §103(a) as being unpatentable over Lin '158 in view of Brantigan (U.S. Patent No. 5,425,772). Applicants respectfully traverse the rejection for at least the following reasons.

In the intervertebral spacer of the present invention, each claw portion extends across the body of the intervertebral spacer from one side surface of the intervertebral spacer to the other side surface, as recited in claim 6. In the Office Action, the Examiner admits that Lin's intervertebral fusion device does not include claw portions, which each extend across the body of the intervertebral fusion device from one side surface to the other side surface. However, the Examiner asserts that, in view of Brantigan, it would have been obvious to modify Lin's intervertebral fusion device such that it includes claw portions which each extend across the body of the intervertebral fusion device from one side surface to the other side surface. Applicants respectfully disagree.

As discussed above with respect to claim 1, Lin's intervertebral device and the arrangement of its protrusions operate together to define how the intervertebral device fits between vertebrae. Thus, modifying the shape and arrangement of its protrusions will materially change the operability of the intervertebral device, especially if one

attempts to modify the protrusions to correspond to a protrusion arrangement as dissimilar as that of Brantigan. Also, Brantigan does not disclose the feature of each of the plurality of claw portions having a vertex, with the respective vertexes arranged along a curved surface formed to extend generally longitudinally of the body. For at least these reasons, Applicants respectfully submit that the rejection of claim 6 is also improper, and request withdrawal thereof.

Based on the above, it is respectfully submitted that this application is now in condition for allowance, and a Notice of Allowance is respectfully requested.

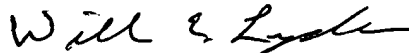
SUMMARY AND CONCLUSION

Entry and consideration of the present amendment, reconsideration of the outstanding Office Action, and allowance of the present application and all of the claims therein are respectfully requested and now believed to be appropriate. Applicants have made a sincere effort to place the present invention in condition for allowance and believe that they have now done so.

Should the Examiner have any questions or comments regarding this response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Should an extension of time be necessary to maintain the pendency of this application, including any extensions of time required to place the application in condition for allowance by an Examiner's Amendment, the Commissioner is hereby authorized to charge any additional fee to Deposit Account No. 19-0089.

Respectfully submitted,
Shigenobu SATO et al.


----- William E. Lyddane
Reg. No. 41,568
Bruce H. Bernstein
Reg. No. 29,027

July 25, 2005
GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191
(703) 716-1191